AMENDMENTS TO THE CLAIMS

Cancel Claims 2 and 19 without prejudice. Please accept amended Claims 1 and 16 as follows:

 (Currently Amended) A method for densification of a thermal spray coating comprising:

depositing a thermal spray coating on a substrate; and mixing all the thermal spray coating and all the substrate by friction stir welding, forming a monolithic composite material consisting of the thermal spray coating and the substrate.

2. (Cancelled)

- 3. (Original) The method of claim 1, wherein the thermal spray coating is deposited by as a plasma spray.
- 4. (Original) The method of claim 1, wherein the thermal spray coating is deposited by oxy-fuel combustion acceleration of a powder feedstock.
- 5. (Original) The method of claim 1, wherein the thermal spray coating is deposited by two-wire electric arc spray.

- 6. (Original) The method of claim 1, wherein the substrate is a ferrous alloy.
- 7. (Original) The method of claim 1, wherein the substrate is a non-ferrous alloy.
- 8. (Original) The method of claim 1, wherein a thermal spray coating is a ceramic, a carbide, a metal, a composite, or a plastics.
- 9. (Original) The method of claim 1, further comprising determining a time between depositing the thermal spray coating and the friction stir welding according to a distance between a spray gun of a thermal spray system and a tool of a friction stir welding system and a speed of the substrate relative to the spray gun and tool.

10-15. (Cancelled)

16. (Currently Amended) A method for densification of a thermal spray coating comprising:

depositing a first thermal spray coating on a substrate;

forming a $\underline{\text{monolithic}}$ composite material by mixing $\underline{\text{all}}$ the thermal spray coating and $\underline{\text{a portion of all}}$ the substrate by friction stir welding; and

depositing a second thermal spray coating on the composite material, wherein the second thermal spray coating is not densified.

- 17. (Previously Presented) The method of claim 16, wherein the mixing causes metal flow of the first thermal spray coating to a depth controlled by a nib of a weld tool into the substrate.
- 18. (Previously Presented) The method of claim 1, further comprising depositing another thermal spray coating on the composite material, wherein the second thermal spray coating is not densified.
- 19. (Cancelled)